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Administrator,

This week Richard Yamada and I had a successful trip to Cincinnati. We toured laboratory facilities, met with researchers and senior leaders, enjoyed ORD tool demonstrations, and attended the 36th Annual ORD Awards Ceremony and Reception to recognize our colleagues across ORD for their valuable contributions to EPA in 2016.

Hot issues

TSCA Support

ORD continues to provide support to OPPT for the successful implementation of the revised TSCA, including:

- **Alternative Testing Strategy Effort:** ORD will meet tomorrow with OPPT and OPP to discuss next steps for the TSCA mandated Alternative Toxicity Testing Strategy Document. The next steps follow from the November 2 public meeting during which OPPT received comments from industry and the international community concerning a preliminary draft of the strategy document.
- **Chemical Pre-Prioritization Effort:** ORD has provided technical materials and will be making a presentation at the upcoming December 11 public meeting focused on pre-prioritization options.
- **Chemical Exposure Support:** ORD has held three workshops with OPPT scientists to discuss information, data, tools and models support estimates of exposure for: chemicals from consumer products, occupational exposure, and ambient exposure. A series of next steps for both ORD and OPPT have been identified from those meetings and are now being reviewed by OPPT.

Reported Cancer Cluster in Cincinnati

On November 13, CDC/NIOSH contacted ORD to participate in a discussion on a potential cancer cluster reported at a City of Cincinnati's police station. While little information is available regarding the specifics of the cancers linked to the station, NIOSH is interested in learning more about potential

environmental exposures. ORD provided general information on potential environmental exposures, given the characteristics and location of the police station. These exposures could include vapor intrusion, radon, electric and magnetic fields, asbestos, HVAC operation, and particulate matter from proximity to two major highways, as well as temporal and spatial limitations of any past air sampling data. NIOSH personnel are meeting with representatives of the Cincinnati Police Department investigative team on November 15. A NIOSH Health Hazard Evaluation (HHE) has been requested. NIOSH will move forward with the investigation, and may follow-up with EPA on additional environmental questions at a later date. This issue has been getting local news coverage.

Visit to Cape Fear, NC on PFAS treatment

On November 30, ORD scientists will visit the Cape Fear Public Utility Authority (CFPUA) plant as part of EPA's PFAS treatment project. This will be an exploratory meeting to understand in detail the PFAS issues and systems treatment approach. The goal will be to further integrate CFPUA's work with Region 4. Similar preliminary discussions have been held with Greater Cincinnati Water Works.

Upcoming public events

ORD to Train Superfund Remedial Project Managers

To support quick implementation of [[HYPERLINK "https://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=321710"](https://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=321710)] that will help EPA set risk-based remedial goals for cleanup of contaminated sediment sites, OLEM has asked the ORD authors to provide training at the Superfund National Association of Remedial Project Manager's Training Program on December 4th in Denver, CO. The new guidance, produced by ORD at the request of OLEM, is in demand by states, EPA regions, tribes, the EPA Great Lakes National Program Office, and Superfund potentially responsible parties. In part, the high demand for training on the guidance is because the new methodology could lower the extent (i.e., fewer acres) and costs of remedial actions while enabling quicker completion of those actions.

National Advisory Council for Environmental Policy and Technology Meeting

On November 28, the National Advisory Council for Environmental Policy and Technology (NACEPT) will meet to review the first draft of their report on EPA's use of citizen science. The council will discuss draft findings and recommendations, which focuses on how to better use citizen science information for actions and decisions. The NACEPT council will also provide comments on EPA's draft Handbook for Citizen Science Quality Assurance (developed by OEI, R1 and ORD/OSA).

National EPA-Tribal Science Council Meeting

On December 4-8, the National EPA-Tribal Science Council's (TSC) meeting will be hosted by the Salt River Pima-Maricopa Indian Community in Phoenix, AZ. Research discussions will focus on EPA's new lead education curriculum, Region 1's RARE project on a fisheries study risk assessment, and trainings on tribal water quality. On December 7, ORD will facilitate a TSC-hosted listening session on tribal science priorities.

Last week Highlights

Net Zero Meeting at Fort Campbell, Kentucky

On November 1-2, ORD and OLEM staff met with Garrison leadership and senior staff from the Department of Public works at U.S. Army's Fort Campbell, Kentucky to explore the potential for new place-based Net Zero projects at the installation. The goals for the meeting were to identify areas of overlapping interest for environmental and public health research and create a list of project concepts to be considered in the next round of ORD's research action plans.

Nutrient Sensor Action Challenge

On November 3, the judging panel for the Nutrient Sensor Action Challenge reviewed proposals for Stage 1 awards (i.e., plans for demonstrating low-cost sensors in the field for local decision-making). Five applications were selected and winners will receive \$10,000: Western Lake Erie – Cooperative Institute for Great Lakes Research, University of Michigan; Portland, Maine – Casco Bay Estuary Partnership; Galena River – Illinois State Geological Survey; Great Bay Estuary – Department of Natural Resources and Environment, University of New Hampshire; and, Upper Chesapeake Bay – University of Maryland Center for Environmental Science.

ORD Tools and Resources webinar

On November 14, ORD hosted our monthly public webinar for states, tribes and others. The webinar highlighted how federal agencies (EPA, NASA, NOAA and USGS) are collaborating to use real-world satellite applications that support environmental management of US lakes by quantifying cyanobacterial harmful algal blooms and related water quality parameters. It also highlighted how satellite cyanobacteria data and three different software tools available to state environmental and health agencies for review and testing as part of the Cyanobacteria Assessment Network (CyAN).

Procedure for Lead Bioavailability Published

The in-vitro extraction procedure built and validated by ORD researchers has now become an SW-846 protocol, [[HYPERLINK "https://www.epa.gov/hw-sw846/validated-test-method-1340-vitro-bioaccessibility-assay-lead-soil"](https://www.epa.gov/hw-sw846/validated-test-method-1340-vitro-bioaccessibility-assay-lead-soil)]. The method is an in-vitro bioaccessibility assay (i.e., the measure of the physiological solubility of the lead that may be available for absorption into the body) for lead-contaminated soils. The amount of lead absorbed into the bloodstream is an important factor in calculating the level of clean up necessary at contaminated sites to safeguard human health. The default value for this has been at 100%; i.e., remove all traces of lead. In real settings, much of the lead can be chemically complexed with other minerals in the soil so that the body will not absorb it. The degree of complexation will vary with the type of soil present, soil pH, and other factors. Anything that lowers the bioavailability factor below 100% will likely make clean up less expensive, since the clean-up will not need to be as stringent.

Grantee Publication

Grantees from the [[HYPERLINK "https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract/10494/report/0"](https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract/10494/report/0)], recently released a report on [[HYPERLINK "http://www.ppic.org/publication/managing-californias-freshwater-ecosystems-lessons-from-the-2012-16-drought/?utm_source=ppic&utm_medium=email&utm_campaign=epub"](http://www.ppic.org/publication/managing-californias-freshwater-ecosystems-lessons-from-the-2012-16-drought/?utm_source=ppic&utm_medium=email&utm_campaign=epub)]. Given changes in water and land use such as reduced flows below reservoirs and disconnection of rivers from floodplains, the recent drought conditions have amplified the effects of the drought along with the ability of species to recover after the drought. Using eight case studies on environmental water management during the 2012-16 drought the report provided three interrelated policy recommendations: improve environmental water accounting through monitoring ecological conditions and tracking water availability and use, establish drought planning and preparation including advanced planning and setting priorities for water allocation ahead of time, and establish flexible ecosystem water budgets including minimum flow and water quality standards.

ORD Supports Region 6 Oklahoma Response

EPA Region 6, ORD, and Oklahoma DEQ have been working together in response to multiple cases of girls (ages ~14-18) falling ill in Dewey, Oklahoma. While the cause for their illnesses is unknown, EPA has been asked, in accordance with the Oklahoma State DEQ, to perform a series of environmental tests at their school. EPA Region 6 On Scene Coordinators have requested information from ORD for methods for sampling and analysis for a variety of potential metals, pesticides, and other hazardous chemicals in air, water, and surfaces. Detailed surface sampling assistance (wipe sampling and method recommendations) has been requested to identify the pesticides applied, as well as where they have been applied. ORD is continuing to assist Region 6 with this effort.

Superfund and State Support:

- **Technical support for West Lake Landfill Superfund Site, Bridgeton, MO, week of November 6.** ORD provided a technical evaluation of a cooling loop system installed at the West Lake Landfill Superfund Site. The Region 7 Remedial Project Manager for Operable Unit 2 (OU-2) requested that ORD provide an overview and initial technical evaluation of the performance of the cooling loop system installed in OU-2 to extract heat from the landfill waste mass. The purpose of the cooling loop system is to function as a deterrent and potential first line of defense from any subsurface smoldering event (SSE) that may move northward in the waste mass. West Lake Landfill is contaminated with radiological waste from uranium ore processing.
- **Field studies to support cleanup at Fort Devens Superfund Site, November 28-December 1.** ORD is conducting field research designed to provide performance verification for groundwater remediation and facilitate testing of the beta version of an ORD-developed analysis tool for evaluating groundwater seepage flux. ORD is assisting Region 1 and the Massachusetts Department of Environmental Protection to investigate the impact of recently implemented remedial measures on groundwater flow and contaminant transport. Fort Devens is a former military training base with petroleum, arsenic, heavy metals, and other hazardous chemical contamination in the groundwater, soil, and sediment.
- **Analysis at Argonne National Lab in support of multiple ORD research projects and technical assistance, Lemont, IL, November 28-December 8** ORD will conduct X-ray absorption spectroscopy studies at the Advanced Photon Source synchrotron facility located at the [[HYPERLINK "https://www.anl.gov/"](https://www.anl.gov/)]. This effort supports research areas including bioavailability, materials management, tech support for soil and sediment contamination, soil amendments for remediation and nanomaterials to determine the speciation of elements to understand fate, risk, and toxicity.
- **ORD support to the Oklahoma Department of Environmental Quality (ODEQ) with soil amendment efforts at Tar Creek Superfund Site:** ORD's efforts will help the state evaluate the effectiveness of a soil amendment technology with regard to bioavailability at this site. ODEQ will collect soil samples that will undergo *in-vivo* animal testing and the speciation analysis by ORD.
- **Field studies at Fort Lewis Logistics Center Superfund Site, Tacoma, WA, November 29-December 6:** ORD will travel to the East Gate Disposal Yard at the Fort Lewis Logistics Center Superfund Site. This field study work is part of a project funded under the U.S. Department of Defense's Environmental Security Technology Certification Program (ESTCP) to conduct long-term post-remedial monitoring using flux-based measurements. This work will help assess long-term benefits of non-aqueous phase liquid source zone remedial treatments and is being conducted in collaboration with the University of Florida. The [[HYPERLINK "https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1001131"](https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1001131)] has groundwater, soil, sludge, and surface water contaminated with heavy metals and other hazardous chemicals.

